INTRODUCTION

The following instructions apply to assembling scoop mounts to Venus, Atlas, Luna, Earth, Polaris, Delta, Neptune, Neptune Plus, Orion Plus, Saturn Plus, Titan Plus and Jupiter Plus Planetgear™ 7000 speed reducers. Instructions for Orion Plus, Saturn Plus, Titan Plus, and Jupiter Plus, are also valid for Orion, Saturn, Titan, and Jupiter, respectively. These scoops are drilled for standard T-frame and IEC motors. Reference Scoop Mount Assembly Configurations (pages 4-11) for motor frame size capabilities, scoop mount part numbers and scoop mount assembly configurations.

NOTE: Consult Rexnord for any reducer/motor combinations not listed, fluid couplings or other devices that require a coupling gap larger than 1/4" (6 mm).

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ASSEMBLY OF SCOOP MOUNT

(No Fan and Fan Shroud Requirements)

1. Determine the scoop mount assembly configuration for the appropriate reducer/motor combination. Reference Scoop Mount Assembly Configurations (Pages 5-12) for the appropriate assembly drawing that corresponds to the scoop mount assembly configuration.
2. **Venus/Atlas/Luna/Earth/Polaris/Delta** — Remove 6 - 1/2" bolts from input shaft side as shown in Figure 1. **Neptune/Neptune Plus/Orion Plus/Saturn Plus/Titan Plus/Jupiter Plus** — Remove 10 - 1/2" bolts from input shaft side as shown in Figure 2.

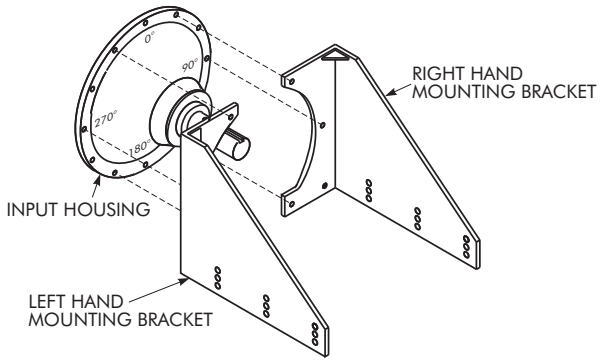


FIGURE 1

3. Position each side bracket to the appropriate side of the input shaft and attach loosely to the reducer.
4. Position and attach the mounting plate to the side brackets. Reference Scoop Mount Assembly Configurations (Pages 5-12) for correct orientation and mounting hole configuration.
5. Center and level the mounting plate with respect to the input shaft.

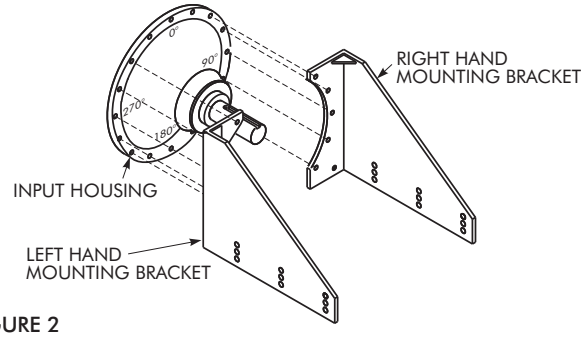


FIGURE 2

a. Centering (Reference Figure 3)

(1) Clamp a piece of key stock to the keyway in the input shaft (or flush to the shaft on a metric input shaft), extending it past the end of the mounting plate.

(2) Rotate the input shaft so that the key stock is exactly in the 12 o'clock position.

(3) With a carpenters square, measure from the key stock to any set of mounting holes the mounting plate to see if they are equal distance from the key stock. Make adjustments to the position of the mounting plate if necessary.

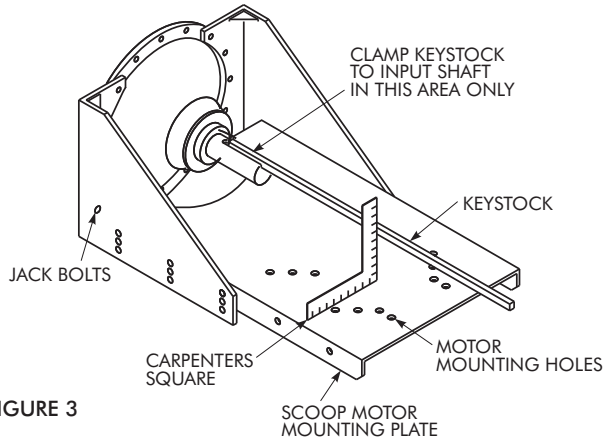


FIGURE 3

b. Leveling

(1) Clamp a piece of key stock to the keyway in the input shaft (or flush to the shaft on a metric input shaft), extending it past the end of the mounting plate.

(2) With a combination square, measure the distance between the key stock and the mounting plate in two places; as close to the shaft as possible and at the end of the mounting plate. If measurements are different use the jack bolts to level mounting plate.

6. Tighten all bolts. Reference Table 1 for recommended bolt torques.

TABLE 1 — Torque Requirements For Dry Fasteners ★

		Inch													
SAE	**Dia**	**1/4**	**5/16**	**3/8**	**7/16**	**1/2**	**9/16**	**5/8**	**3/4**	**7/8**	**1**	**1 1/8**	**1 1/4**	**1 3/8**	**1 1/2**
General Purpose Grade 2	**Torque (ft-lbs)**	6	12	21	34	52	75	104	178	184	265	380	530	700	930
High Strength Grade 5	**Torque (ft-lbs)**	9	18	33	53	80	116	160	285	460	690	850	120	157	208
Alloy Steel Grade 8	**Torque (ft-lbs)**	13	26	47	74	114	164	225	400	650	970	137	194	254	337
		Metric													
Grade	**Nom Dia Standard Pitch**	**M5**	**M6**	**M7**	**M8**	**M10**	**M12**	**M14**	**M16**	**M18**	**M20**	**M22**	**M24**	**M27**	**M30**
8.8	**Torque (Nm)**	6.15	10.5	17.5	26	51	89	141	215	295	420	570	725	107	145
10.9	**Torque (Nm)**	8.65	15	25	36	72	125	198	305	420	590	800	102	151	205
12.9	**Torque (Nm)**	10.4	18	29	43	87	150	240	365	500	710	960	122	181	245

★ The torques shown produce a clamp load of 80% of proof load. They assume clean, dry threads with a torque coefficient of 0.2, and a coefficient of friction of 0.14. Plated threads, need only 3/4 torque shown. Well lubricated threads need only 1/2 torque shown.
Source: Rexnord Eng. Specification: GES8-19, 04/10/79.

ASSEMBLY OF SCOOP MOUNT

(Fan and Fan Shroud Requirements)

1. Reference Scoop Mount Assembly Configurations (Pages 5-12) to determine the appropriate configuration and assembly drawing for the each reducer/motor combination.
2. Remove fan shroud from reducers input end.
3. Loosen set screws on fan and remove fan from input shaft.
4. Remove key from shaft.
5. Venus/Atlas/Earth/Polaris- Remove 6 - 1/2" bolts from input shaft side as shown in Figure 1 (Page 1). Neptune/Saturn/Titan/Jupiter - Remove 10 - 1/2" bolts from input shaft side as shown in Figure 2 (Page 1).
6. Position each side bracket to the appropriate side of the input shaft and attach loosely to the reducer. At the same time, position and attach the shroud clips over the side bracket. Reference Figure 4.

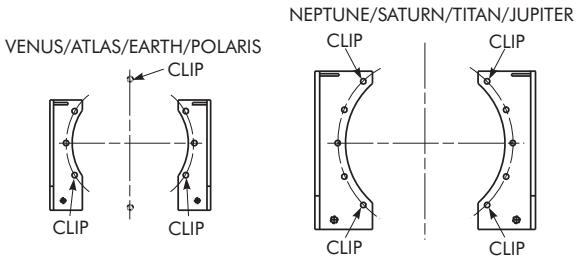
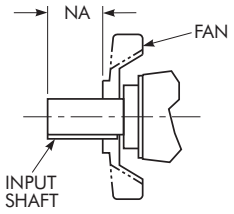


FIGURE 4

7. Position and attach the mounting plate to the side brackets. Reference the Scoop Mount Assembly Configurations (Pages 5-12) for correct orientation and mounting hole configuration.
8. Center and level the mounting plate with respect to the input shaft. Reference previous section on (Page 1) for methods description.
9. Tighten all bolts. Reference Table 2 for recommended bolt torques.
10. Replace key to input shaft.
11. Place fan on shaft.
    a. Reducer was modified at factory for fan requirements
        (1) Locate the set screw which is 90° from the keyway on the fan to the spotting hole on the shaft.
        (2) Tighten set screws.
    b. Reducer needs to be modified for fan requirements
        (1) From the chart (below), determine the distance from the end of the input shaft to the front edge of the fan.

Reducer Size	NA (Inch)	NA (mm)
Venus	2.88	75
Atlas	2.88	75
Luna	2.88	75
Earth	3.25	85
Polaris	2.88	75
Delta	2.88	75
Neptune	4.00	102
Neptune Plus	4.00	102
Orion Plus	4.00	102
Saturn Plus	4.69	119
Titan Plus	4.69	119
Jupiter Plus	4.69	119



        (2) Position the fan on the input shaft to the determined distance.

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(3) With fan in place, tighten set screw that is located 90° from the keyway so that it makes a mark on the shaft.

(4) Remove fan.

(5) With a 1/8" (3 mm) drill, make a small indentation on the surface of the shaft at the set screw mark.

(6) With a 5/16" (8 mm) drill, enlarge the indentation made by the 1/8" (3mm) drill (approximately 1/16" to 1/8" [2 mm to 3 mm] deep).

(7) Place fan on shaft.

(8) Locate the set screw which is 90° from the keyway on the fan to the spotting hole on the shaft.

(9) Tighten set screws.

NOTE: At this time it is necessary to modify the fan shroud in order to attach the fan shroud to the reducer. Refer to Planetgear 7000 drawing number 18840058 (Page 13) for the modification details that correspond to a specific reducer size.

12. With tin snips or equivalent, cut away material from the fan shroud as shown in Planetgear 7000 drawing number 18840058.

13. Position the fan shroud so that it fits tight over the shroud clips and also to insure that when the input shaft is rotated, the fan does not interfere with the shroud. Gently bend the shroud clips to position the shroud.

NOTE: If the shroud clips are mounted over the mounting bracket (as described in Figure 4) then the fan shroud mounting holes need to be relocated for those position.

14. With a marker on an extension rod, go between the fan and the shroud to mark the position of the shroud clips. Reference Figure 5.

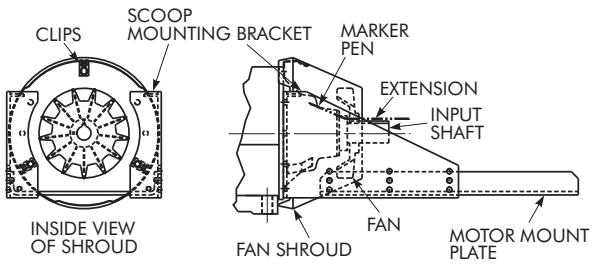


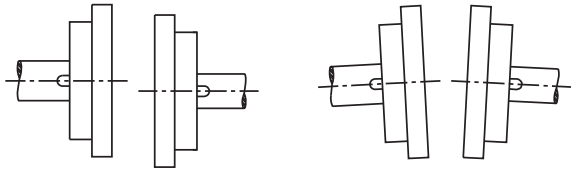
FIGURE 5

15. Remove the shroud. Center punch and drill new 3/8" mounting holes at the marked shroud clip positions.

16. Position and attach the fan shroud. Install remote grease line.

ATTACHING COUPLING AND COUPLING GUARD

Mount the reducer coupling hub on the input shaft and the motor coupling hub on the motor shaft as instructed in the manual shipped with the coupling. If the coupling is not a Rexnord Omega™, refer to the manufacturers literature for installation instructions. If Rexnord does not mount the motor, the couplings are mounted for shipment only. Coupling bolts and coupling instructions are packed inside the coupling elements. Note: Prior to the installation of the element, check both coupling hubs for the required parallel and angular alignment.



1. When the coupling is in place, position the coupling guard over the coupling so that the coupling is centered inside the guard and the opening of the guard centers on the shafts.

2. Mark the position where the mounting holes lie on the scoop mounting plate.

3. Drill the proper size holes in the mounting plate. Tap threads in mounting plate if preferred.

4. Attach coupling guard to mounting plate using the correct fasteners. Refer to Table 2 for recommended bolt torques.

WARNING: All rotating equipment must be properly guarded in accordance with OSHA standards. Failure to do so may result in personal injury or property damage.

MOUNTING OF TRANSMISSION ACCESSORIES

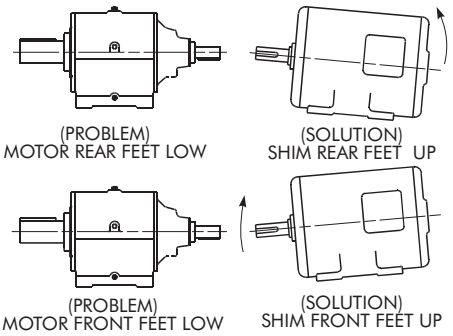
WARNING: When the Planetgear 7000 speed reducer is connected to a motor or driven equipment through the use of couplings, sprockets, gears or belt drives, all rotating parts must be properly guarded with guarding that conforms to OSHA requirements to prevent personal injury or property damage.

When direct coupling motors to the Planetgear 7000 reducer, follow the four step process shown below to achieve proper motor to reducer alignment. Refer to coupling manufacture specifications to determine required alignment accuracy.

NOTE: Steps 1 to 4 may have to be repeated several times to achieve manufacturers required accuracies.

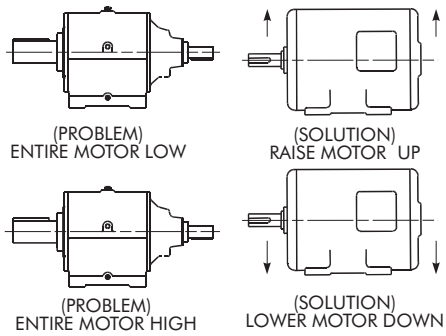
STEP #1 (Side View Plane)

Correct for ***angular*** misalignment in the ***side view plane***.



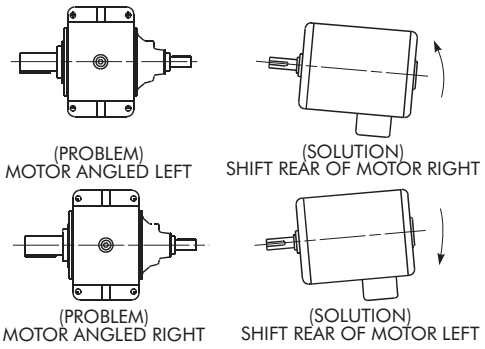
STEP #2 (Side View Plane)

Correct for ***parallel*** misalignment in the ***side view plane***.



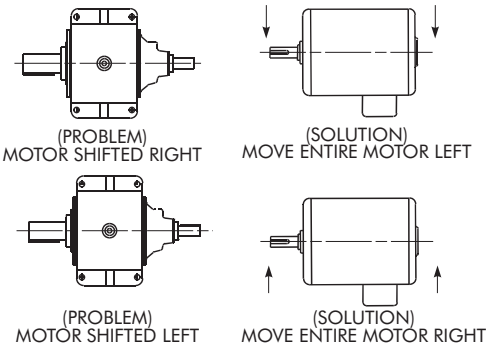
STEP #3 (Top View Plane)

Correct for ***angular*** misalignment in the ***top view plane***.



STEP #4 (Side View Plane)

Correct for ***parallel*** misalignment in the ***top view plane***.



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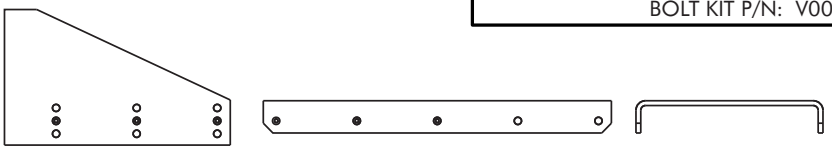
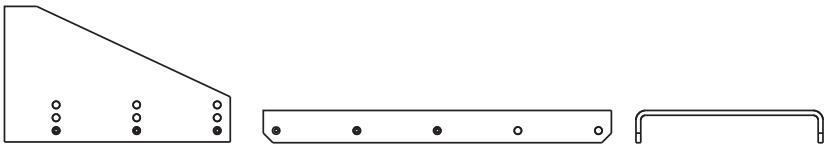
Scoop Mount Assembly Configurations
Venus/Atlas/Luna/Earth Quad/Polaris Quad/Delta Quad

VSCP1

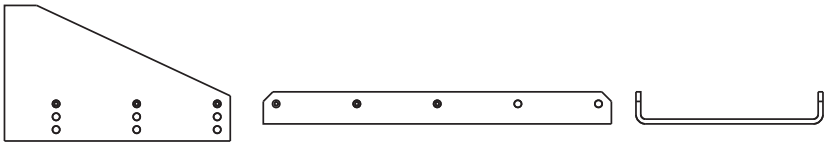
SCOOP MOUNTING PLATE P/N: 1886000501
LH SCOOP BRACKET P/N: 5884000880
RH SCOOP BRACKET P/N: 5884000890
BOLT KIT P/N: V002



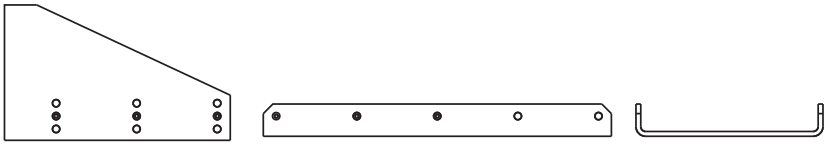
MOTOR FRAME SIZE: 143T / 145T



MOTOR FRAME SIZE: 182T / 184T



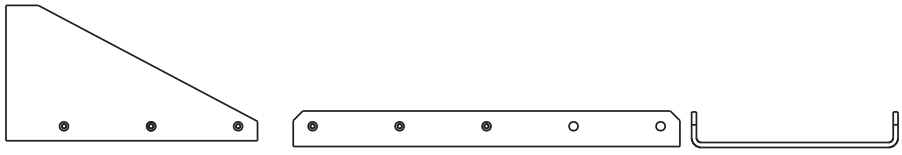
MOTOR FRAME SIZE: 213T / 215T



MOTOR FRAME SIZE: 254T / 256T

VSCP2

SCOOP MOUNTING PLATE P/N: 1886000601
LH SCOOP BRACKET P/N: 5884000980
RH SCOOP BRACKET P/N: 5884000990
BOLT KIT P/N: V003

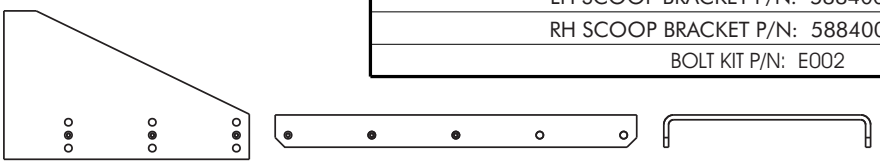


MOTOR FRAME SIZE: 284T / 286T

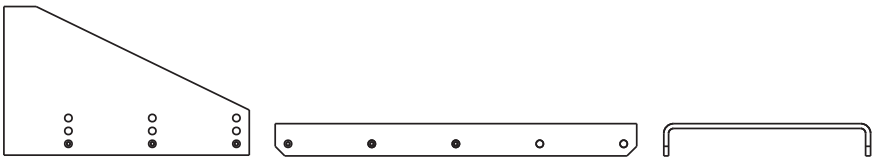
Scoop Mount Assembly Configurations
Earth/Polaris/Delta/Neptune Quad/Neptune Plus Quad

ESCP1 (& PSCP1FS)

SCOOP MOUNTING PLATE P/N: 1886000701
POLARIS-(FAN & SHROUD MODIFIED PLATE: 1886006601)
LH SCOOP BRACKET P/N: 5884001080
RH SCOOP BRACKET P/N: 5884001090
BOLT KIT P/N: E002



MOTOR FRAME SIZE: 145T



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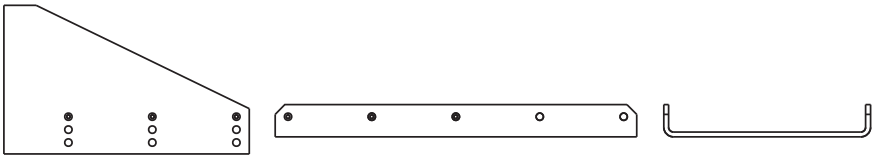

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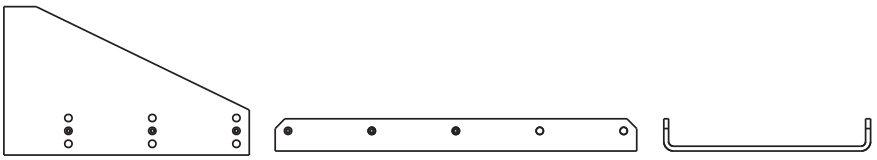
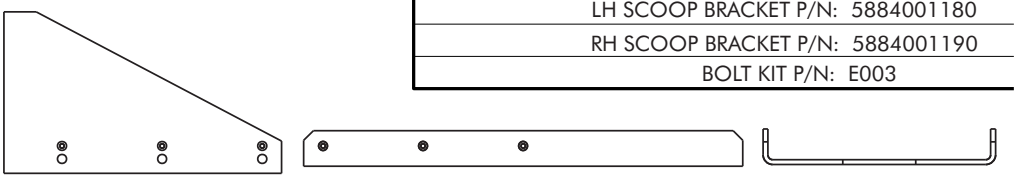


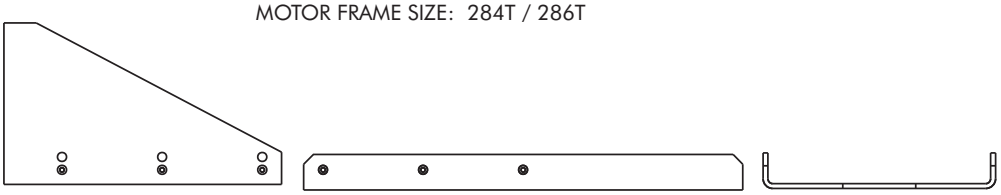
MOTOR FRAME SIZE: 254T / 256T

ESCP2 (& PSCP2FS)

SCOOP MOUNTING PLATE P/N: 1886000801
POLARIS-(FAN & SHROUD MODIFIED PLATE: 1886006701)
LH SCOOP BRACKET P/N: 5884001180
RH SCOOP BRACKET P/N: 5884001190
BOLT KIT P/N: E003



MOTOR FRAME SIZE: 284T / 286T



MOTOR FRAME SIZE: 324T / 326T

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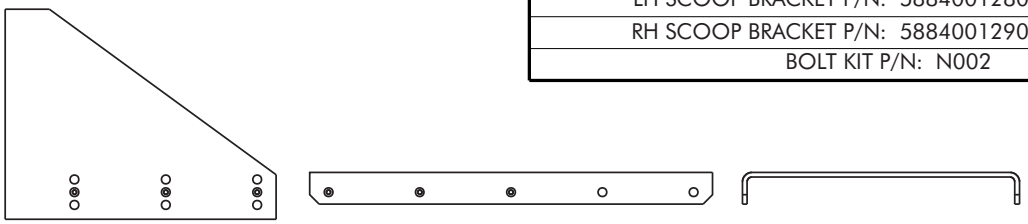
Scoop Mount Assembly Configurations

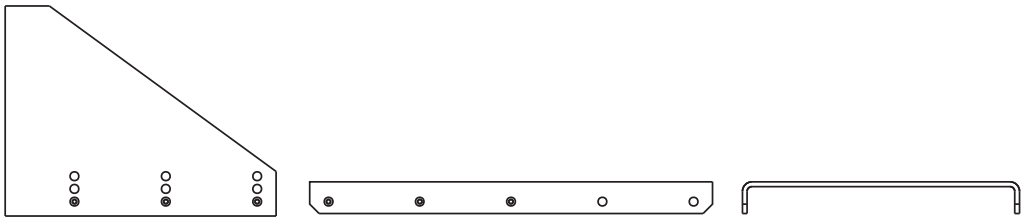
Neptune/Neptune Plus/Orion Plus/Saturn Plus Quad/Titan Plus Quad

NSCP1

SCOOP MOUNTING PLATE P/N: 1886000901
(FAN & SHROUD MODIFIED PLATE: 1886003401)
LH SCOOP BRACKET P/N: 5884001280
RH SCOOP BRACKET P/N: 5884001290
BOLT KIT P/N: N002



MOTOR FRAME SIZE: 213T / 215T



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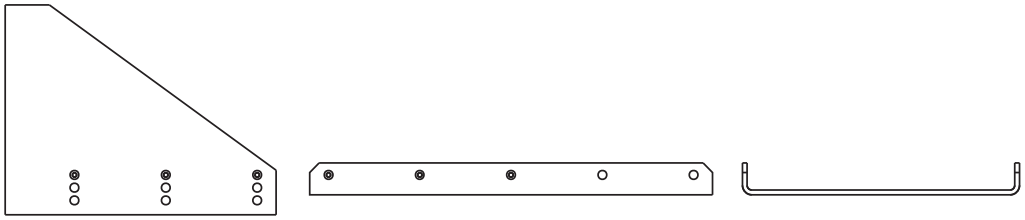
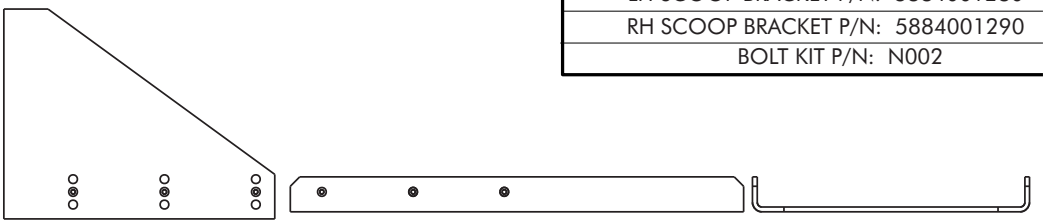


MOTOR FRAME SIZE: 284T / 286T

NSCP2

SCOOP MOUNTING PLATE P/N: 1886001001
LH SCOOP BRACKET P/N: 5884001280
RH SCOOP BRACKET P/N: 5884001290
BOLT KIT P/N: N002

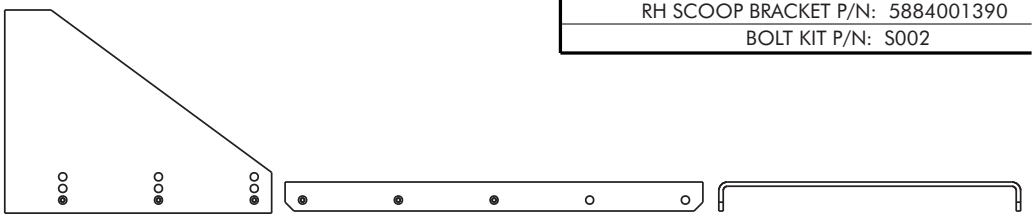


MOTOR FRAME SIZE: 324T / 326T

Scoop Mount Assembly Configurations
Saturn Plus/Titan Plus/Jupiter Plus

SSCP1

SCOOP MOUNTING PLATE P/N: 1886001101 (FAN & SHROUD MODIFIED PLATE: 1886003501)
LH SCOOP BRACKET P/N: 5884001380
RH SCOOP BRACKET P/N: 5884001390
BOLT KIT P/N: S002



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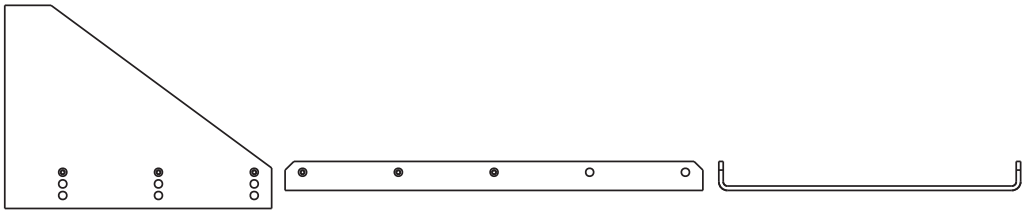
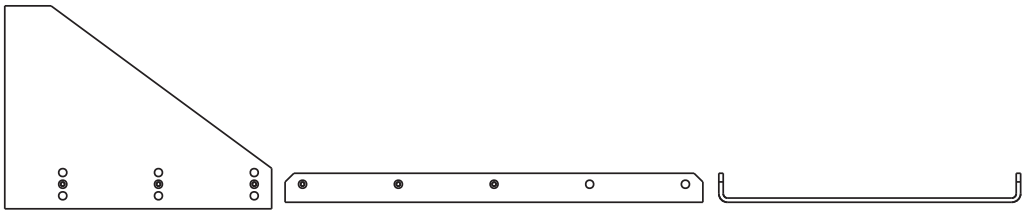


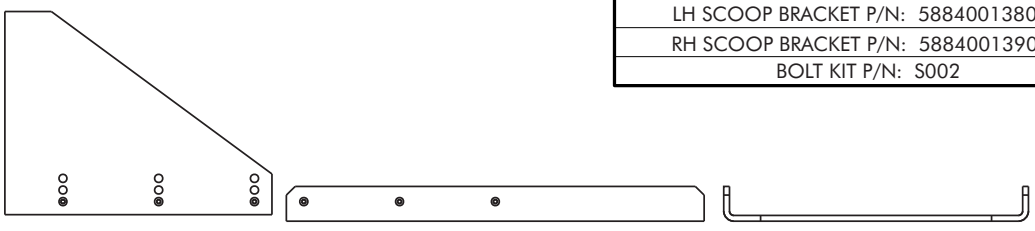
MOTOR FRAME SIZE: 284T / 286T



MOTOR FRAME SIZE: 324T / 326T

SSCP2

SCOOP MOUNTING PLATE P/N: 1886001201
LH SCOOP BRACKET P/N: 5884001380
RH SCOOP BRACKET P/N: 5884001390
BOLT KIT P/N: S002



MOTOR FRAME SIZE: 364T / 365T

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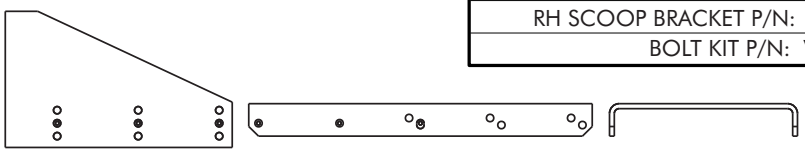
Scoop Mount Assembly Configurations (Metric)
Venus/Atlas/Luna/Earth Quad/Polaris Quad/Delta Quad

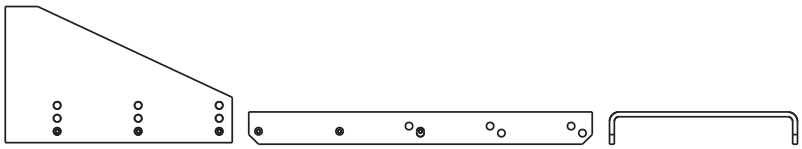
MVSCP1

SCOOP MOUNTING PLATE P/N: 1886007501
LH SCOOP BRACKET P/N: 5884000880
RH SCOOP BRACKET P/N: 5884000890
BOLT KIT P/N: V002

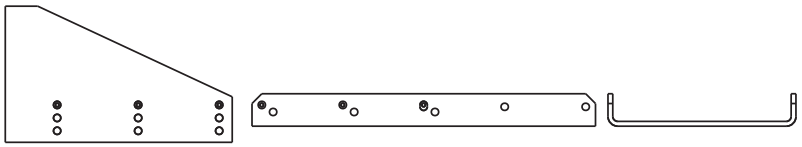


MOTOR FRAME SIZE: 90LN

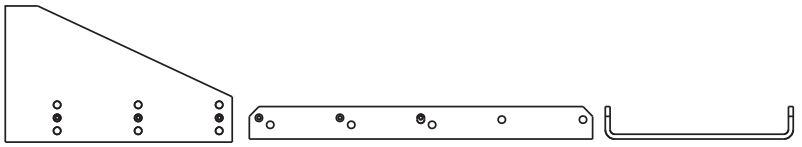
MOTOR FRAME SIZE: 100L



MOTOR FRAME SIZE: 112M



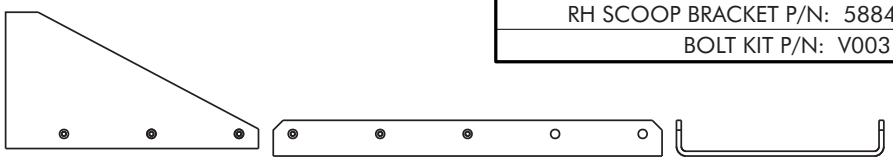
MOTOR FRAME SIZE: 132M



MOTOR FRAME SIZE: 160L

MVSCP2

SCOOP MOUNTING PLATE P/N: 1886007601
LH SCOOP BRACKET P/N: 5884000980
RH SCOOP BRACKET P/N: 5884000990
BOLT KIT P/N: V003

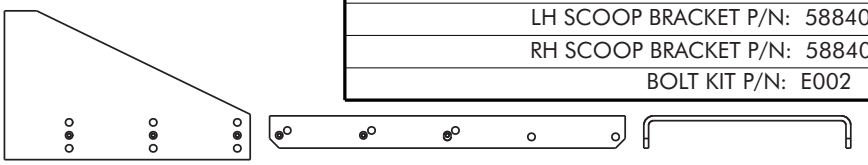


MOTOR FRAME SIZE: 180L

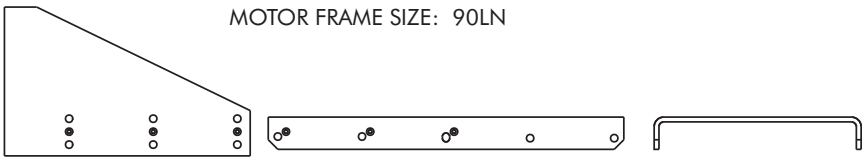
Scoop Mount Assembly Configurations (Metric)
Earth/Polaris/Delta/Neptune Quad/Neptune Plus Quad

MESCP1 (& MPSCP1FS)

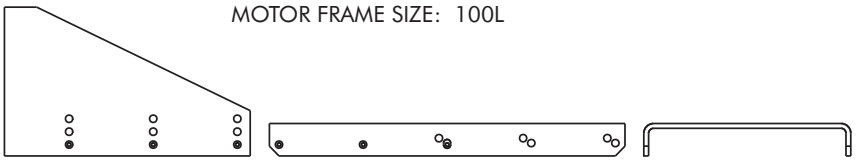
SCOOP MOUNTING PLATE P/N: 1886007701
POLARIS-(FAN & SHROUD MODIFIED PLATE: 1886008901)
LH SCOOP BRACKET P/N: 5884001080
RH SCOOP BRACKET P/N: 5884001090
BOLT KIT P/N: E002



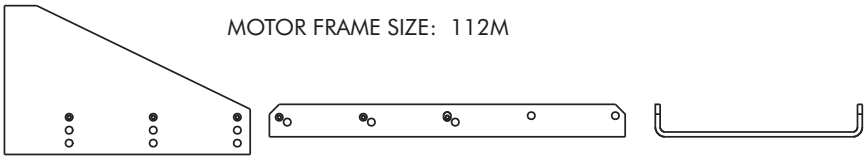
MOTOR FRAME SIZE: 90LN



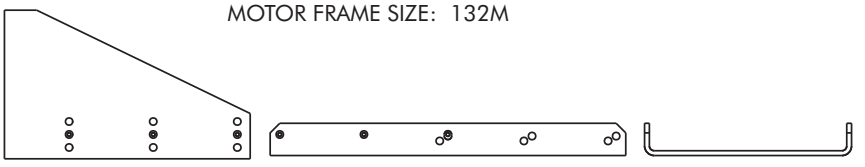
MOTOR FRAME SIZE: 100L



MOTOR FRAME SIZE: 112M



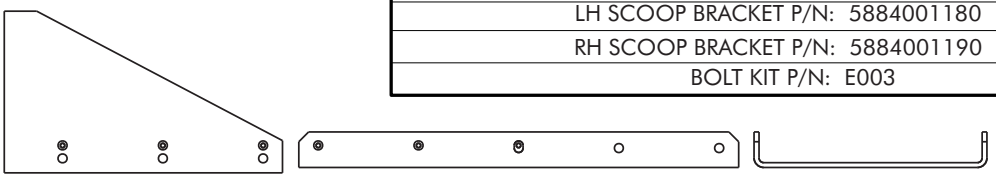
MOTOR FRAME SIZE: 132M



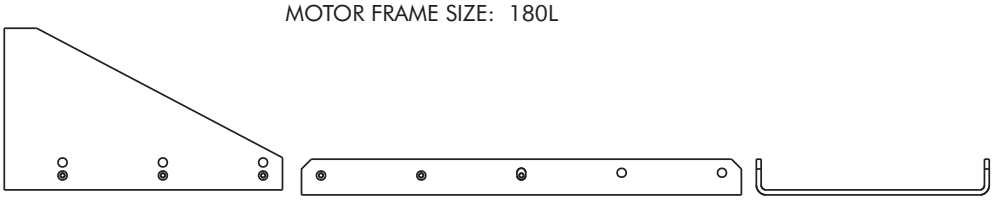
MOTOR FRAME SIZE: 160L

MESCP2 (& MPSCP2FS)

SCOOP MOUNTING PLATE P/N: 1886007801
POLARIS-(FAN & SHROUD MODIFIED PLATE: 1886009001)
LH SCOOP BRACKET P/N: 5884001180
RH SCOOP BRACKET P/N: 5884001190
BOLT KIT P/N: E003



MOTOR FRAME SIZE: 180L



MOTOR FRAME SIZE: 200L

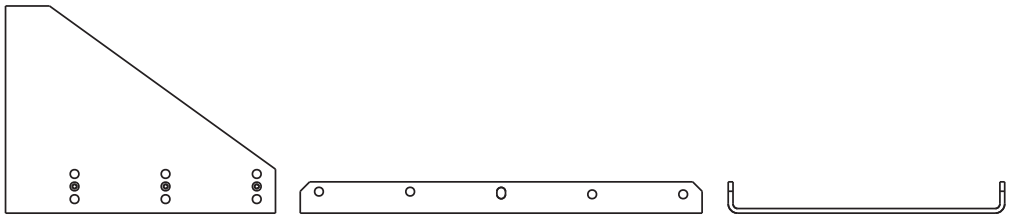
Rexnord Industries, LLC, 3001 W. Canal St., Milwaukee, WI 53208-4200
Telephone: 414-342-3131 Fax: 414-937-4359
e-mail: info@rexnord.com web: www.rexnord.com

Scoop Mount Assembly Configurations (Metric)
Neptune/Neptune Plus/Orion Plus/Saturn Plus Quad/Titan Plus Quad

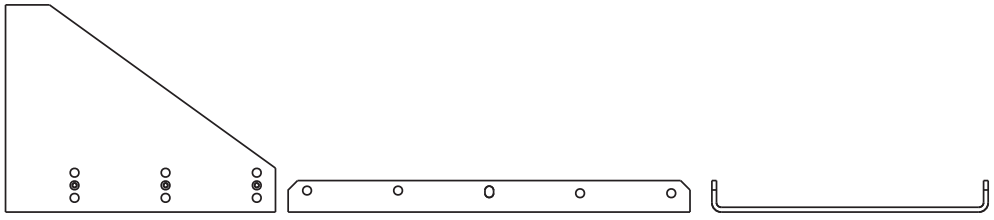
MNSCP1

SCOOP MOUNTING PLATE P/N: 1886007901
LH SCOOP BRACKET P/N: 5884001280
RH SCOOP BRACKET P/N: 5884001290
BOLT KIT P/N: N002

MOTOR FRAME SIZE: 132M



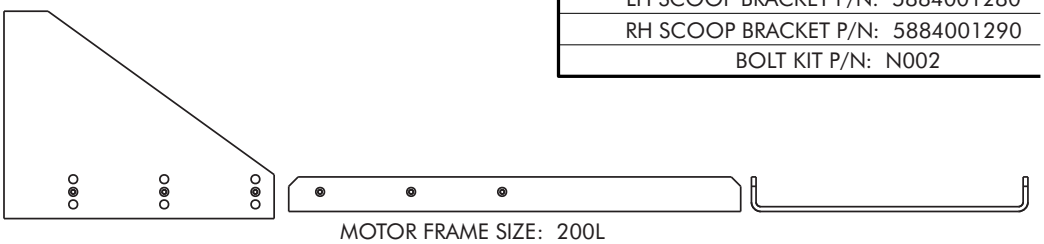
MOTOR FRAME SIZE: 160L



MOTOR FRAME SIZE: 180L

MNSCP2

SCOOP MOUNTING PLATE P/N: 1886008001
LH SCOOP BRACKET P/N: 5884001280
RH SCOOP BRACKET P/N: 5884001290
BOLT KIT P/N: N002

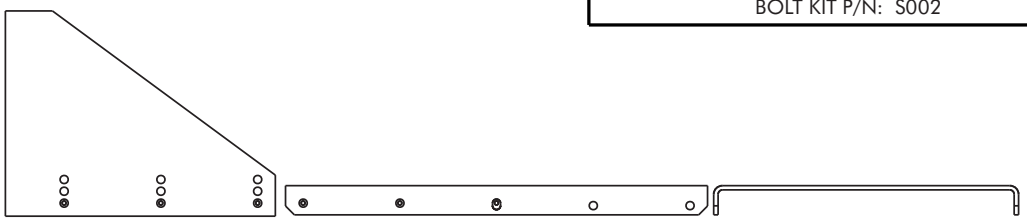


MOTOR FRAME SIZE: 200L

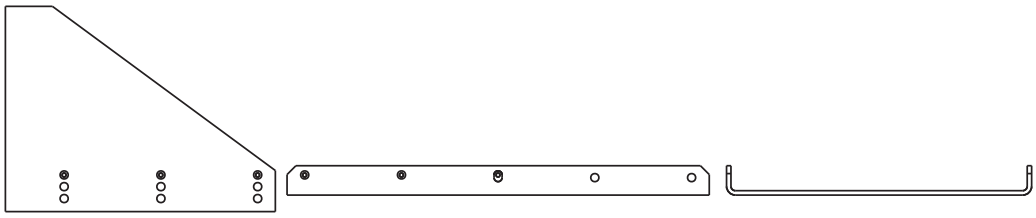
Scoop Mount Assembly Configurations (Metric)
Saturn Plus/Titan Plus/Jupiter Plus

MSSCP1

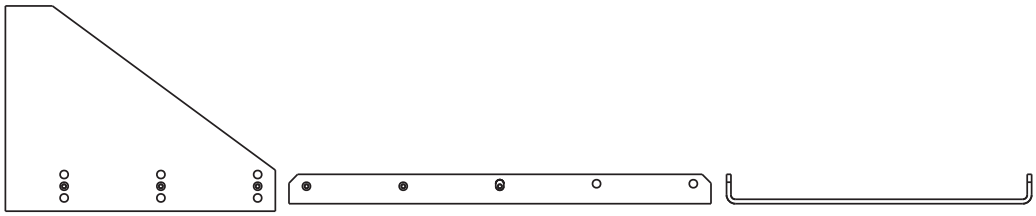
SCOOP MOUNTING PLATE P/N: 1886008101
LH SCOOP BRACKET P/N: 5884001380
RH SCOOP BRACKET P/N: 5884001390
BOLT KIT P/N: S002



MOTOR FRAME SIZE: 160L



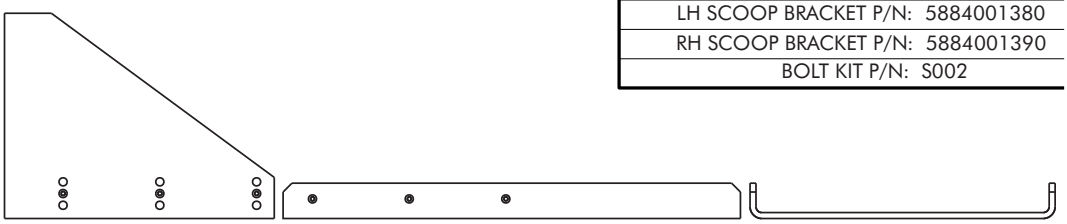
MOTOR FRAME SIZE: 180L



MOTOR FRAME SIZE: 200L

MSSCP2

SCOOP MOUNTING PLATE P/N: 1886008201
LH SCOOP BRACKET P/N: 5884001380
RH SCOOP BRACKET P/N: 5884001390
BOLT KIT P/N: S002



MOTOR FRAME SIZE: 225M

Rexnord Industries, LLC, 3001 W. Canal St., Milwaukee, WI 53208-4200
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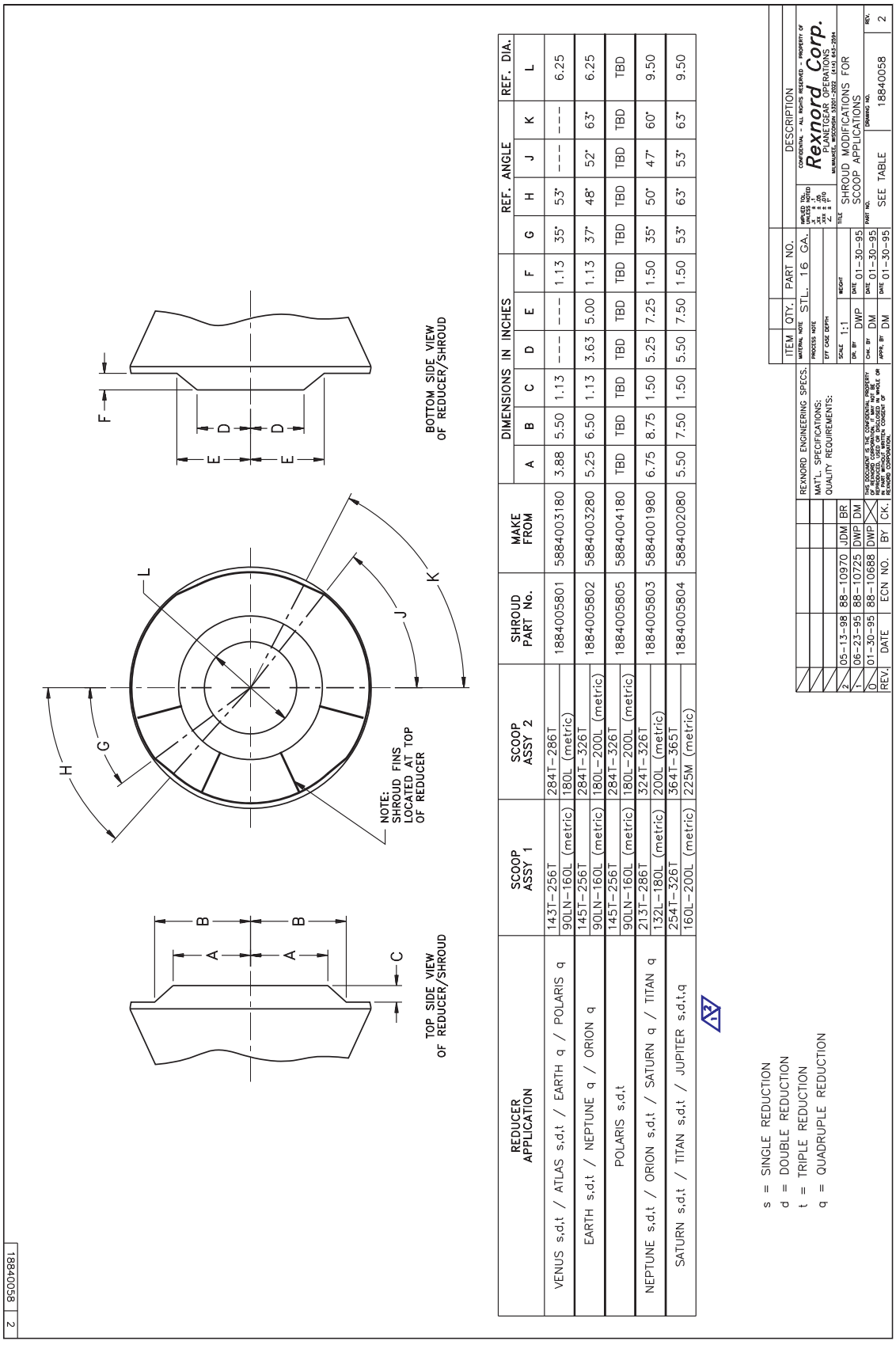
e-mail: info@rexnord.com web: www.rexnord.com



REDUCER APPLICATION	SCOOP ASSY 1	SCOOP ASSY 2	SHROUD PART No.	MAKE FROM	DIMENSIONS IN INCHES						REF. ANGLE			REF. DIA.
					A	B	C	D	E	F	G	H	J	K	L
VENUS s,d,t / ATLAS s,d,t / EARTH q / POLARIS q	143T–256T	284T–286T	1884005801	5884003180	3.88	5.50	1.13	---	---	1.13	35°	53°	---	---	6.25
	90LN–160L (metric)	180L (metric)													
EARTH s,d,t / NEPTUNE q / ORION q	145T–256T	284T–326T	1884005802	5884003280	5.25	6.50	1.13	3.63	5.00	1.13	37°	48°	52°	63°	6.25
	90LN–160L (metric)	180L–200L (metric)													
POLARIS s,d,t	145T–256T	284T–326T	1884005805	5884004180	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
	90LN–160L (metric)	180L–200L (metric)													
NEPTUNE s,d,t / ORION s,d,t / SATURN q / TITAN q	213T–286T	324T–326T	1884005803	5884001980	6.75	8.75	1.50	5.25	7.25	1.50	35°	50°	47°	60°	9.50
	132L–180L (metric)	200L (metric)													
SATURN s,d,t / TITAN s,d,t / JUPITER s,d,t,q	254T–326T	364T–365T	1884005804	5884002080	5.50	7.50	1.50	5.50	7.50	1.50	53°	63°	53°	63°	9.50
	160L–200L (metric)	225M (metric)													

s = SINGLE REDUCTION
d = DOUBLE REDUCTION
t = TRIPLE REDUCTION
q = QUADRUPLE REDUCTION

REV.	DATE	ECN NO.	BY	CK.
2	05–13–98	88–10970	JDM	BR
1	06–23–95	88–10725	DWP	DM
0	01–30–95	88–10688	DWP	

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ITEM	QTY.	PART NO.	DESCRIPTION

MATERIAL NOTE STL. 16 GA.
PROCESS NOTE
EFF CASE DEPTH
SCALE 1:1 WEIGHT
DR. BY DWP DATE 01–30–95
CHK. BY DM DATE 01–30–95
APPR. BY DM DATE 01–30–95

UNLESS OTHERWISE SPECIFIED
.XX ± .010
.XXX ± .005
∠ ± 1°

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Rexnord Corp.
PLANETGEAR OPERATIONS
MILWAUKEE, WISCONSIN 53201-2022 (414) 643-2944

TITLE SHROUD MODIFICATIONS FOR SCOOP APPLICATIONS

PART NO. SEE TABLE
DRAWING NO. 18840058
REV. 2

18840058 2